## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of claims**:

**1-6. (Cancelled)**

**7. (Currently Amended)** A non-aqueous electrolyte battery comprising:

a positive electrode,

a negative electrode,

a separator disposed between the positive and negative electrodes, and

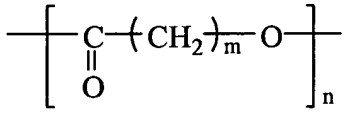
an electrolyte solution;

wherein, of the positive electrode and the negative electrode, either the positive electrode comprises a positive electrode current collector coated with a positive electrode binder composition composed primarily of a thermoplastic resin and a positive electrode active material, or the negative electrode comprises a negative electrode current collector coated with a negative electrode binder composition composed primarily of a thermoplastic resin and a negative electrode active material,

wherein the thermoplastic resins have a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100 ,$$

within a range of 150 to 800%, and contain units of general formula (1) below



(1)

wherein the letter m is a number from 3 to 5, and the letter n is 5 or more,

wherein a residue of the thermoplastic resin in the binder composition is at least one other thermoplastic resin selected from the class consisting of a flouropolymer, a synthetic rubber, a polyolefin and a polyether,

with the proviso that when the residue of the thermoplastic resin in the binder composition is a polyvinylidene fluoride, the glass transition temperature of the binder composition is lower than the freezing point of the electrolyte solution.

**8.** (**Currently Amended**) A non-aqueous electrolyte battery comprising:

a positive electrode,

a negative electrode,

a separator disposed between the positive and negative electrodes, and

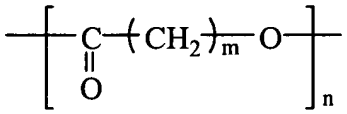
an electrolyte solution;

wherein the positive electrode comprises a positive electrode current collector coated with a positive electrode binder composition composed primarily of a thermoplastic resin and a positive electrode active material, and the negative electrode comprises a negative electrode current collector coated with a negative electrode binder composition composed primarily of a thermoplastic resin and a negative electrode active material,

wherein the thermoplastic resins have a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100 \ ,$$

within a range of 150 to 800%, and contain units of general formula (1) below



(1)

wherein the letter m is a number from 3 to 5, and the letter n is 5 or more.

wherein a residue of the thermoplastic resin in the binder composition is at least one other thermoplastic resin selected from the class consisting of a flouropolymer, a synthetic rubber, a polyolefin and a polyether,

with the proviso that when the residue of the thermoplastic resin in the binder composition is a polyvinylidene fluoride, the glass transition temperature of the binder composition is lower than the freezing point of the electrolyte solution.

**9.** (**Currently Amended**) A non-aqueous electrolyte battery comprising:

a positive electrode and a negative electrode, each comprised of a current collector coated with a binder composition composed primarily of a thermoplastic resin and an active material,

a separator disposed between the positive and negative electrodes, and

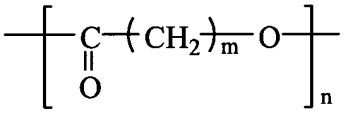
an electrolyte solution;

~~wherein 1 to 20 % by weight of the thermoplastic resin in the binder composition is a thermoplastic resin which has a glass transition temperature lower than the freezing point of the electrolyte solution,~~

wherein the thermoplastic resins have a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100 ,$$

within a range of 150 to 800%, and contain units of general formula (1) below



(1)

wherein the letter m is a number from 3 to 5, and the letter n is 5 or more,

wherein a residue of the thermoplastic resin in the binder composition is at least one other thermoplastic resin selected from the class consisting of a flouropolymer, a synthetic rubber, a polyolefin and a polyether,

with the proviso that when the residue of the thermoplastic resin in the binder composition is a polyvinylidene fluoride, the glass transition temperature of the binder composition is lower than the freezing point of the electrolyte solution.

**10. (Cancelled)**

**11.** (**Currently Amended**) The non-aqueous electrolyte battery of any one of claims 7 to ~~10~~ 9, 18 and 19 wherein the separator is composed of a separator base impregnated with an electrolyte solution.

**12.** (**Currently Amended**) The non-aqueous electrolyte battery of any one of claims 7 to ~~10~~ 9, wherein the separator is composed of a gel electrolyte

prepared by shaping a thermoplastic resin having a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100 \ ,$$

within a range of 150 to 800%, then immersing the shaped resin in an electrolyte solution to effect swelling.

**13.** (**Withdrawn, Currently Amended**) An electrical double-layer capacitor comprising:

a pair of polarizable electrodes,

a separator disposed between the polarizable electrodes, and,

an electrolyte solution;

wherein one or both of the pair of polarizable electrodes is comprised of a current collector coated with a polarizable electrode binder composition composed primarily of the thermoplastic resin of claim ~~1~~ 7 and activated carbon.

**14. (Withdrawn, Currently Amended)** An electrical double-layer capacitor comprising:

a pair of polarizable electrodes, each comprised of a current collector coated with a polarizable electrode binder composition composed primarily of a thermoplastic resin and activated carbon,

a separator disposed between the polarizable electrodes, and

an electrolyte solution;

wherein 1 to 20 % by weight of the thermoplastic resin in the binder composition is a thermoplastic resin according to claim 7 ~~1 which has a glass transition temperature lower than the freezing point of the electrolyte solution~~.

**15. (Cancelled)**

**16. (Withdrawn, Currently Amended)** The electrical double-layer capacitor of any one of claims 13 ~~to 15~~ and 14, wherein the separator is composed of a separator base impregnated with an electrolyte solution.

17. (**Withdrawn, Currently Amended**) The electrical double-layer capacitor of any one of claims 13 ~~to 15~~ and 14, wherein the separator is composed of the gel electrolyte ~~of claim 5 or 6~~ prepared by shaping a thermoplastic resin, then immersing the shaped resin in an electrolyte solution to effect swelling, wherein the thermoplastic resin has a swelling ratio, as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100 \ ,$$

within a range of 150 to 800%.

18. (**Currently Amended**) A non-aqueous electrolyte battery comprising:

a positive electrode and a negative electrode, each comprised of a current collector coated with a binder composition composed primarily of a thermoplastic resin and an active material,

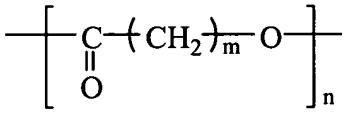
a separator disposed between the positive and negative electrodes, and

an electrolyte solution;

wherein 1 to 20 % by weight of the thermoplastic resin in the binder composition for the positive electrode is a thermoplastic resin which has a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100 ,$$

within a range of 150 to 800%, and contains units of general formula (1) below



(1)

wherein the letter m is a number from 3 to 5, and the letter n is 5 or more,

wherein a residue of the thermoplastic resin in the binder composition is at least one other thermoplastic resin selected from the class consisting of a flouropolymer, a synthetic rubber, a polyolefin and a polyether,

with the proviso that when the residue of the thermoplastic resin in the binder composition is a polyvinylidene fluoride, the glass transition temperature of the binder composition is lower than the freezing point of the electrolyte solution.

**19.** (**Currently Amended**) A non-aqueous electrolyte battery comprising:

a positive electrode and a negative electrode, each comprised of a current collector coated with a binder composition composed primarily of a thermoplastic resin and an active material,

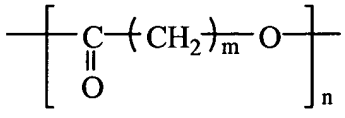
a separator disposed between the positive and negative electrodes, and

an electrolyte solution;

wherein 1 to 20 % by weight of the thermoplastic resin in the binder composition is a thermoplastic resin which has a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100 ,$$

within a range of 150 to 800%, and contains units of general formula (1) below



(1)

wherein the letter m is a number from 3 to 5, and the letter n is 5 or more,

wherein a residue of the thermoplastic resin in the binder composition is at least one other thermoplastic resin selected from

the class consisting of a flouropolymer, a synthetic rubber, a polyolefin and a polyether,

with the proviso that when the residue of the thermoplastic resin in the binder composition is a polyvinylidene fluoride, the glass transition temperature of the binder composition is lower than the freezing point of the electrolyte solution.

**20.** (**Previously Presented**) The non-aqueous electrolyte battery according to claims 7, 8, 18 and 19, wherein the thermoplastic resin having said swelling ratio is a thermoplastic polyurethane resin prepared by reacting a polyol compound with a polyisocyanate compound and a chain extender.

**21-22.** (**Cancelled**)